GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Land Protection Branch
2 Martin Luther King, Jr. Drive
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404-657-8600

November 15, 2018

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

U.S. Environmental Protection Agency
Region 4 Emergency Response and Removal Branch
c/o Mr. Jim Webster, Chief
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Subject: Site Referral
Slag Dump Site
395 Elm Street NW, Atlanta, Fulton County, Georgia

Dear Mr. Webster:

The Georgia Environmental Protection Division (EPD) has prepared this letter in response to an email from Matt Taylor of the United States Environmental Protection Agency (USEPA) dated October 31, 2018. This email and the associated attachment reported elevated concentrations of lead and arsenic in slag and soil on residential properties in the vicinity of 395 Elm Street NW in Atlanta, Fulton County, Georgia. A conference call was held between EPD representatives and USEPA Region 4 representatives on November 7, 2018 to further discuss the findings. EPD understands that these impacts were discovered through a project conducted by Emory University. EPD requests that USEPA consider this site for any emergency, time-critical, or other federal response actions that may be warranted.

Please keep EPD updated on the status of USEPA actions at this site. If you have any questions, please contact Will Lucas at (404) 656-3851 or via email at william.lucas@dnr.ga.gov.

Sincerely,

Chuck Mueller, Chief
Land Protection Branch

Attachments: October 31, 2018 email from Matt Taylor
Slag Dump Site Report

cc: Matt Taylor (via email: Taylor.Matt@epa.gov)

Hayes, David

From: Taylor, Matt <Taylor.Matt@epa.gov>
Sent: Wednesday, October 31, 2018 2:34 PM
To: Mueller, Chuck; Metzger, Jason; Hayes, David
Cc: Webster, James; McGuire, Jim; Frederick, Tim; Adams, Glenn; Gaughan, Perry
Subject: Slag and heavy metal in West Atlanta
Attachments: Slag Dump Site Report Final.docx

Chuck and Jason,

I briefly spoke with David Hayes, GA EPD this afternoon and needed to pass along the attached report from the Saikawa Lab at Emory University. The Saikawa Lab at Emory has been taking soil samples from Western Atlanta urban growing spaces and lawns to test for heavy metal concentrations and bioavailability. The Emory students have been consulting with Tim Fredericks, EPA Risk Assessor, to determine the best sampling methods with an XRF. The results of the XRF sampling showed elevated levels of lead and arsenic above EPA removal management levels for residential properties (400 and 68 ppm respectively). Contamination seems to be from slag piles in the area.

Since this is not an EPA sampling event, I wanted relay this information to GA EPD. Once you have time to review the information, we can set up a meeting or conference call to determine the next steps. EPA will be happy to provide any assistance. If you have further questions about the sampling event or data, Tim Fredericks phone number is 404-562-8598. And if you have any questions on how EPA may provide assistance, please contact me at 404-562-8759.

Thanks, Matt

Matthew W. Taylor, Chief
Removal Operations Section
Superfund Division
404-562-8759

Slag Dump Site Report

Sam Peters, Emory University

Project Overview

The Saikawa Lab at Emory has been taking soil samples from Western Atlanta urban growing spaces and lawns to test for heavy metal concentrations and bioavailability. All samples were taken using the incremental sampling method and analyzed via X-Ray Fluorescence (XRF), in consultation with the Environmental Protection Agency. Three samples were taken from each location, and each sample was comprised of 30 subsamples. Soil was dried and sieved at 150 μm before analysis. Each sample was measured at least 4 times with the XRF maintaining a relative standard deviation of 25% or less. The reported concentration was the 95% Upper Confidence Limit (UCL) of the mean of the multiple XRF readings. Rural background samples were taken by the Saikawa group at one garden and 2 farms outside the Interstate 285 perimeter.

During a tomato festival and soil shop, a community partner brought a piece of slag from near one of our sampling sites on Elm St. to our attention (Figure 1). This led to us finding an empty lot, which served as a dump site for slag. The owners of the site are listed as Askalou W Petros & Michael J Joseph, 4126 Flintridge Dr, Stone Mountain, GA, 30038 We have attempted to contact both of them at the following phone numbers with no success; 404-935-3143 and 404-844-3587. We analyzed slag and soil from the empty lot and surrounding area. Below are summarized results of the total dataset that includes 342 soil samples from urban and rural background locations.

Lead (Pb), Arsenic (As), and chromium (Cr) mean 95% upper confidence levels (UCL) were significantly elevated in slag and soil near slag compared to other urban soil samples (Table 1). The average UCL concentration of Pb in slag and in soil near slag was 2741 and 1980 ppm, respectively, compared to an average of 147 ppm in other urban locations. The average UCL concentration of As in slag and in soil near slag was 297 and 77 ppm, respectively, compared to 7.4 ppm in other urban locations. The average UCL concentration of Cr in slag and in soil near slag was 357 and 126 ppm, respectively, compared to 58 ppm in other urban locations. These concentrations for Pb and As are much higher than the EPA screening levels for residential soil (400 and 68 ppm respectively). Additionally, this soil is in the "high risk" category of >1,200 ppm for Pb in gardening soil (USEPA, 2013). Importantly, Cr reported is total Cr, not Cr(VI). Without a known source of Cr(VI), it is unlikely these concentrations of Cr (III) alone would pose a significant health risk.

Beyond these 3 high priority metals, a summary of all metals that were significantly higher in slag or slag soils compared to other urban samples can be found in Figure 2. Not pictured are Fe and S due to scale differences. The average UCL concentration of Fe in slag and in soil near slag was 297,153 and 53,016 ppm, respectively, compared to 25,655 ppm in other urban locations. The average UCL concentration of S in slag and in soil near slag was 7,495 and 1,971 ppm, respectively, compared to 607 ppm in other urban locations.

Figure 1: Site Location, 395 Elm St. NW

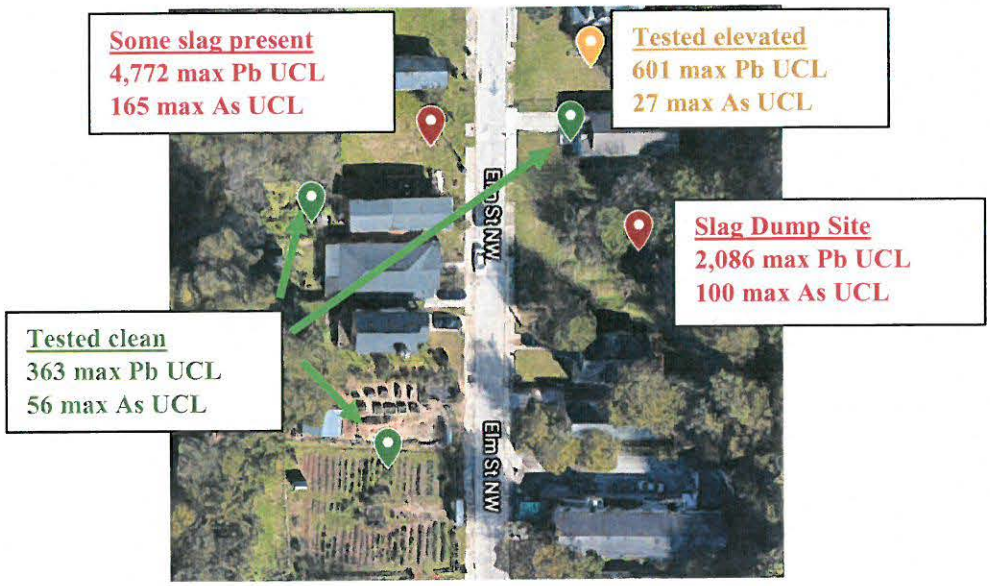
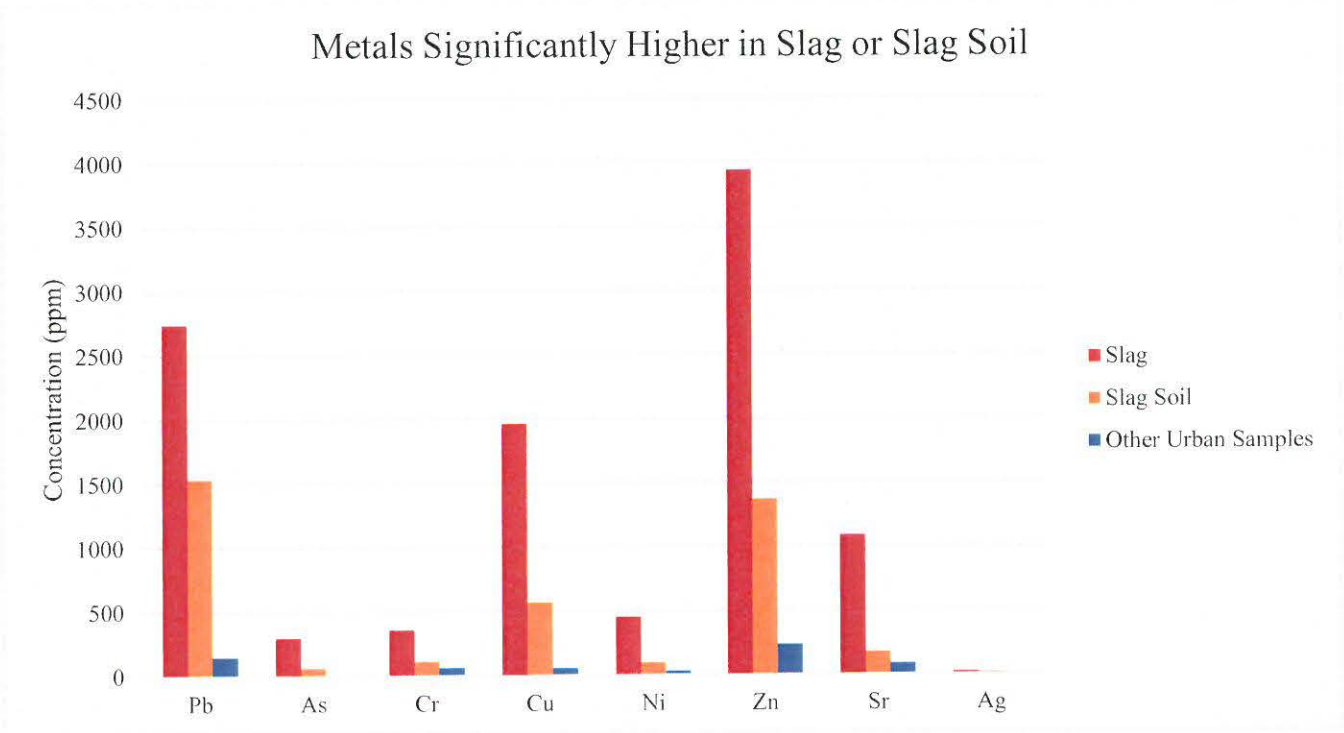


Table 1: Testing Results for High Priority Metals*

Source (N)	Pb Min, Mean, Max UCL	As Min, Mean, Max UCL	Cr Min, Mean, Max UCL
Slag (7)	63, 2741, 6133	7.8, 297, 683	133, 357, 861
Soil Beneath Slag (9)	128, 1980, 4772	0, 77, 165	73, 126, 179
Other Urban Samples (287)	4.2, 147, 1280	0, 7.4, 116	0, 58, 222
Rural Background (39)	0, 26, 118	0, 1.6, 7.4	0, 54, 110

*All values do not yet account for calibration curve adjustments. This will be calculated for final reports and analysis. Values shown in Table 1 are 95% upper confidence levels (UCL) and are all in ppm.

Figure 2



Sources Cited

USEPA. (2013). Technical review workgroup recommendations regarding gardening and reducing exposure to lead-contaminated soils, (May), 23. https://doi.org/10.1093/annonc/mdq564